

Research Article

THE ECONOMIC RESTRUCTURING OF THE AGRICULTURAL SECTOR IN THE SOUTHERN KEY ECONOMIC REGION, VIETNAM IN THE PERIOD 2010-2019

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ABSTRACT

Economic sector restructuring is one of the mandatory requirements of Vietnam's industrialization and modernization process. Along with the whole country, the structure of economic sectors in the Southern key economic region in recent years has also shifted towards industrialization and modernization, promoting the potentials and advantages of the region. The Southern key economic region is a dynamic economic region with the most significant contribution rate in the country, economic structure shifts in a positive direction, focusing on industries and services that have the advantage of creating high added value. However, the economic transition towards industrialization and modernization in the sectors, especially the agricultural industry, is still slow in the region. Therefore, this article focuses on analyzing the process of economic restructuring in the agricultural industry in the southern key economic region, from which the article gives some suggestions for the process of economic restructuring in this industry more efficient.

Keywords: Economic restructuring, agriculture industry, Southern key economic region, Vietnam.

INTRODUCTION

Economic sector restructuring is one of the essential contents of Vietnam's industrialization and modernization process. Over 30 years of implementing the cause of comprehensive, synchronous, and radical renewal initiated and led by the Communist Party of Vietnam, the structure of the economic sector in Vietnam has shifted towards meeting the requirements of industrialization and modernization. Along with localities across the country, the economic structure in the southern key economic region in recent years has also shifted towards industrialization and modernization, promoting the potentials and advantages of the region. According to the statistical yearbook, the GRDP structure of the Southern key economic region by economic sectors in the period 2000 - 2019 has shifted towards exploiting the advantages of each industry. The share of the agricultural industry in the GRDP has decreased from 10.5% in 2000 to 5.72% in 2019; the proportion of industry-construction group decreased from 54.3% in 2000 to 43.01% in 2019. In contrast, the service sector increased from 35.2% to 41.08%. The restructuring of the economic industry following the above trend has contributed to increasing social labor productivity, accelerating economic growth, and promoting the social progress of the region. However, in general, the current structure of the economic sector in the Southern key economic region has not yet brought into full play the potentials and advantages of the region, causing a waste in the use of resources. In the context of the fourth industrial revolution, deeper international integration, rapid development of foreign economic relations which have opened up new opportunities as well as great challenges for economic restructuring of the region in the coming time. In which, the study of the restructuring of the agricultural sector in the southern key economic region is of great significance in the current context.

STRUCTURE OF GRDP BY ECONOMIC SECTOR

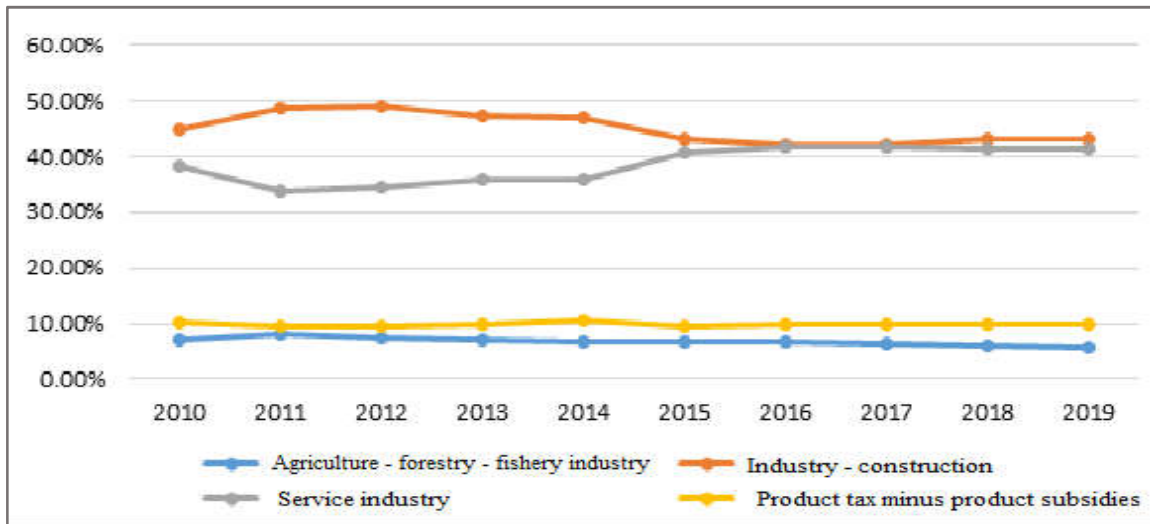
Through more than 20 years of master planning for socio-economic development, the Southern key economic region has achieved significant achievements, with remarkable economic growth, infrastructure construction, and economic restructuring. The Southern key economic region during the period 2010 - 2019 continues to be the most developed economic region in the country, making an essential contribution to the process of industrialization and modernization of the country and international integration. In 2019, the region's total product reached VND 2,776.2 trillion, significantly contributing to the country's GRDP, accounting for 46% of the country's GRDP. In the period 2010 - 2019, the economic restructuring in the Southern key economic region is more favorable than the economic restructuring of the whole country, focusing on the industry - construction and services rather than agricultural industry. The total GRDP at current prices of the Southern key economic region in 2010 - 2019 has increased by 2.63 times from 1,056.6 trillion VND in 2010 to 2,776.2 trillion VND in 2019. The added value of the agriculture - forestry - fishery industry has increased 2.13 times from 74.6 trillion dong to 158.9 trillion dong; the industry - construction group's added value increased 2.52 times from 473.1 trillion dong to 1,194.2 trillion dong. At the same time, the added value of the service sector has also increased by 2.86 times, from 402.6 trillion dong to 1,151.6 trillion dong during this period.

Table 1: Size and structure of GRDP by industry group in the Southern key economic region for the period 2010 - 2019

Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
The whole country (thousand billion VND)	2.157,8	2.779,9	3.245,4	3.584,3	3.937,9	4.192,9	4.502,7	5.006,0	5.542,3	6.037,3
Southern key economic region	1.056,6	1.339,2	1.531,8	1.679,1	1.857,0	1.919,4	2.056,1	2.277,7	2.529,5	2.776,2
Agriculture - forestry - fishery industry	74,6	110,1	114,0	116,4	124,8	130,4	139,0	141,9	148,1	158,9
Industry - construction	473,1	649,3	749,3	793,3	870,7	826,6	862,3	960,7	1.085,5	1.194,2
Service industry	402,6	451,0	524,7	602,2	667,0	782,7	854,3	950,2	1.048,3	1.151,6
Product tax minus product subsidies	106,2	128,9	143,8	167,5	194,9	179,8	201,5	225,0	247,5	271,5
STRUCTURE (%)	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00	100,00
Agriculture - forestry - fishery industry	7,06	8,22	7,44	6,93	6,72	6,79	6,76	6,23	5,86	5,72
Industry - construction	44,78	48,48	48,91	47,25	46,88	43,07	41,94	42,18	42,91	43,02
Service industry	38,11	33,67	34,25	35,87	35,92	40,78	41,55	41,72	41,44	41,48
Product tax minus product subsidies	10,05	9,63	9,39	9,98	10,50	9,37	9,80	9,88	9,79	9,78

Source: Synthesized and calculated from the Statistical Yearbook of 8 provinces and cities in the Southern key economic region

Thus, the added value of the service sector increased faster than the GRDP of the region, while the added value of the agriculture - forestry - fishery, and industry - construction sectors increased slower than the GRDP of the region. Therefore, the structure of GRDP by economic sectors in the Southern key economic region in the period 2010 - 2019 has shifted according to the following trend:



Source: Synthesized and calculated from Statistical Yearbook

Figure 1: GRDP structure by sector in the Southern key economic region for the period 2010 - 2019

Table 1 shows that the economic structure by sector of the Southern key economic region in the period 2010 - 2019 has shifted towards industrialization and modernization more clearly. The proportion of industry - construction in GRDP is always the highest and still has stable development; while the proportion of the agriculture - forestry - fishery sector is always the lowest and tends to decrease, while the proportion of the service sector is high and tends to increase. The rate of GRDP restructuring by economic groups in the Southern key economic region in the period 2010 - 2019 is measured by $\cos\varphi$ coefficient:

$$\cos\varphi = \frac{0,0706 \times 0,0572 + 0,4478 \times 0,4302 + 0,3811 \times 0,4148}{\sqrt{(0,0706^2 + 0,4478^2 + 0,3811^2) \times (0,0572^2 + 0,4302^2 + 0,4148^2)}} = 0,9978$$

$\varphi = 3,8^\circ$ means that the structure of GRDP by economic sectors in the Southern key economic region in the period 2010 - 2019 has not changed very slowly.

The structure of GRDP by the territory of the Southern key economic region also has a clear difference between localities. Ho Chi Minh City always has the highest proportion of GRDP in the region. In 2019, Ho Chi Minh City accounted for 48.2% of the GRDP of the whole region and accounted for 22.16% of the GRDP of the entire country; Binh Duong province accounts for 13%, followed by Ba Ria - Vung Tau 12.9% and Dong Nai 12.7%. The remaining four provinces, Binh Phuoc, Tay Ninh, Long An, and Tien Giang account for a very low proportion of GRDP (13% of the GRDP of the whole region).

Table 2: GRDP structure by industry and by locality of the Southern key economic region

Unit: %

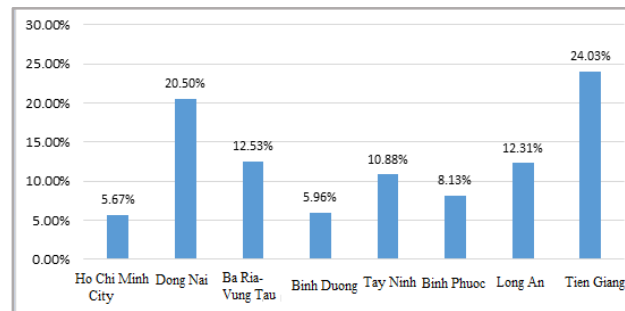
Year	2010	2015	2016	2017	2018	2019
Ho Chi Minh City	100,00	100,00	100,00	100,00	100,00	100,00
- Agriculture - forestry - fishery industry	0,67	0,73	0,72	0,66	0,66	0,67
- Industry - construction	27,52	25,00	24,88	24,75	24,72	24,17
- Service industry	57,67	61,66	61,34	61,50	61,71	62,18
- Product tax minus product subsidies	14,14	12,61	13,17	13,09	12,90	12,98
Dong Nai	100,00	100,00	100,00	100,00	100,00	100,00
- Agriculture - forestry - fishery industry	14,23	11,88	11,76	10,18	9,55	9,20
- Industry - construction	53,50	58,19	58,33	58,68	59,58	60,84
- Service industry	23,62	21,78	22,24	22,89	22,65	22,18
- Product tax minus product subsidies	8,66	8,15	7,67	8,25	8,22	7,78
Ba Ria-Vung Tau	100,00	100,00	100,00	100,00	100,00	100,00
- Agriculture - forestry - fishery industry	3,26	5,05	5,72	5,42	5,32	5,55
- Industry - construction	83,13	77,85	74,97	75,16	75,53	74,91
- Service industry	9,65	12,69	14,28	14,34	13,81	13,93
- Product tax minus product subsidies	3,96	4,41	5,04	5,08	5,34	5,61
Binh Duong	100,00	100,00	100,00	100,00	100,00	100,00
- Agriculture - forestry - fishery industry	5,26	3,26	3,01	3,05	2,77	2,62
- Industry - construction	63,94	66,65	66,86	66,40	66,55	66,77
- Service industry	19,64	21,54	21,76	22,17	22,33	22,38
- Product tax minus product subsidies	11,15	8,55	8,37	8,38	8,35	8,23
Tay Ninh	100,00	100,00	100,00	100,00	100,00	100,00
- Agriculture - forestry - fishery industry	38,52	27,80	27,80	25,56	22,84	21,13
- Industry - construction	26,16	34,71	34,71	36,77	39,61	42,29
- Service industry	35,16	33,14	33,14	32,76	32,58	31,54
- Product tax minus product subsidies	0,15	4,36	4,36	4,91	4,97	5,03
Binh Phuoc	100,00	100,00	100,00	100,00	100,00	100,00
- Agriculture - forestry - fishery industry	34,74	34,94	28,03	26,48	22,60	21,00
- Industry - construction	20,34	23,60	27,55	30,85	34,87	37,74
- Service industry	40,01	36,61	40,22	38,37	38,06	36,89
- Product tax minus product subsidies	4,92	4,85	4,19	4,30	4,48	4,37
Long An	100,00	100,00	100,00	100,00	100,00	100,00
- Agriculture - forestry - fishery industry	29,48	22,20	20,66	18,35	17,21	15,86
- Industry - construction	31,34	39,30	41,70	44,89	47,71	50,00
- Service industry	35,08	31,93	30,95	29,95	28,39	27,59
- Product tax minus product subsidies	4,09	6,58	6,69	6,80	6,69	6,54
Tien Giang	100,00	100,00	100,00	100,00	100,00	100,00
- Agriculture - forestry - fishery industry	48,89	43,16	44,27	41,20	39,40	39,00
- Industry - construction	18,20	24,10	21,54	24,40	26,16	26,78
- Service industry	29,59	29,26	29,18	29,04	28,86	28,48
- Product tax minus product subsidies	3,33	3,48	5,01	5,37	5,58	5,74

Source: Synthesized and calculated from the Statistical Yearbook of 8 provinces and cities in the southern key economic region

RESTRUCTURING THE AGRICULTURE - FORESTRY - FISHERY INDUSTRY IN THE SOUTHERN KEY ECONOMIC REGION

The agriculture, forestry, and fishery sector are considered a solid foundation for sustainable socio-economic development. It solves food security well, creates jobs, and ensures income for a part of the Southern key economic region population. As of 2019, the production value of the agriculture - forestry - fishery sector at current prices of the southern key economic region reached VND 158.8 trillion, accounting for 5.8% of the region's economic structure and accounting for 18.85% value of agricultural - forestry - fishery production of the whole country. Although accounting for a small proportion of the region's economic structure, the agro-forestry-fishery industry plays a vital role because this production activity accounts for 19.98% of laborers aged 15 years and older working in various industries. Moreover, this industry has great significance in providing raw materials for the processing industry (including for export) and food for consumption, contributing to the region's ecological balance when industrialization and urbanization is increasing.

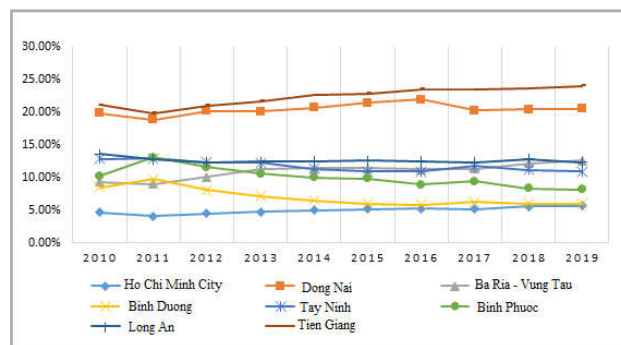
In the region, Tien Giang province is the locality with the highest production value of agro-forestry-fishery, accounting for 24.03% of the production value of agro-forestry-fishery in the whole region. Followed by Dong Nai accounted for 20.5%, Ba Ria - Vung Tau accounted for 12.53%, Long An accounted for 12.31%. Binh Duong and Ho Chi Minh City are the two localities with the lowest value of agricultural - forestry - fishery production in the region with 5.96% and 5.67% respectively.



Source: Calculated from the data of the Statistical Yearbook

Figure 2: The proportion of agricultural - forestry - fishery production value of localities in the region in 2019

From 2010 to 2019, the production value of the agriculture - forestry - fishery sector of the Southern key economic region is increasing, although the structure of the agricultural - forestry - fishery industry is decreasing. Specifically, the value of agro-forestry-fishery production in the Southern key economic region increased 2.13 times, from 74.62 trillion VND in 2010 to 158.87 trillion VND in 2019, an average increase of 8, 8%/year (lower than the national average growth rate of 12.11%). Agro-forestry-fishery production of the region is concentrated mainly in Tien Giang, Dong Nai, Ba Ria - Vung Tau, and Long An. These four provinces account for 69.37% of the agricultural - forestry - fishery production value of the whole region, in which Tien Giang accounts for the highest proportion with 24.03%. In the region, Ba Ria - Vung Tau province has the highest increase in agricultural - forestry - fishery production value of 2.91 times, from 6.83 trillion VND in 2010 to 19.91 trillion VND in 2019 and followed by Ho Chi Minh City with an increase of 2.64 times, from 3.41 trillion VND in 2010 to 9 trillion VND in 2019. The locality with the slowest growth in the value of agro-forestry-fishery production in the region during this period is Binh Duong, increasing only 1.54 times, from VND 6.16 trillion in 2010 to VND 9.47 trillion in 2019. The production value of agriculture - forestry - fishery of Dong Nai, Ba Ria - Vung Tau, Tien Giang, and Ho Chi Minh City increased faster than the value of the whole region. In contrast, the value of Binh Duong, Tay Ninh, Binh Phuoc, and Long An increased slower than the value of agro-forestry-fishery production of the entire region. So the production value structure agro-forestry-fishery production values of localities in the southern key economic region in the period 2010 - 2019 have shifted according to the following trends:



Source: Calculated from the data of the Statistical Yearbook

Figure 3: The structure of production value of the agriculture - forestry - fishery sector by locality in the Southern key economic region in the period 2010 - 2019

Table 3: The proportion of GRDP in agriculture - forestry - fishery by locality compared to the Southern key economic region

Unit: %

Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Whole region	100	100	100	100	100	100	100	100	100	100
TP.HCM	4,57	5,40	6,26	5,33	5,71	5,16	5,20	5,17	5,50	5,67
Đồng Nai	19,45	18,85	19,49	20,03	20,57	21,35	21,62	20,23	20,29	20,50
Bà Rịa – Vũng Tàu	9,16	8,98	9,73	11,19	11,41	11,34	11,10	11,34	12,17	12,53
Bình Dương	8,25	9,69	7,82	7,14	6,47	5,98	5,75	6,30	6,02	5,96
Tây Ninh	14,65	16,77	14,57	13,71	12,52	12,42	12,12	11,77	11,16	10,88
Bình Phước	10,03	8,97	11,53	11,15	10,68	10,58	8,75	9,44	8,43	8,13
Long An	13,31	12,70	11,96	12,31	12,45	12,51	12,29	12,33	12,82	12,31
Tiền Giang	20,58	18,65	18,63	19,15	20,18	20,65	23,16	23,43	23,61	24,03

Source: Synthesized and calculated from the Statistical Yearbook of 8 provinces and cities in the southern key economic region

Table 3 shows that the proportion of Tien Giang province's agricultural - forestry - fishery production value is always the highest compared to other localities in the region and still tends to increase. Ho Chi Minh City always has the lowest proportion of agricultural - forestry - fishery production value in the region, and this proportion still manages to grow but not significantly in the period 2010 - 2019.

Agriculture sector

The Southern key economic region has many favorable conditions for agricultural production in both cultivation and animal husbandry. Over the years, the region has developed agricultural production in the direction of commodity production to enhance added value and sustainable development, improving the competitive advantages of products and the region's agricultural industry as a whole. Some provinces in the Southern key economic region such as Ho Chi Minh City, Dong Nai, and Binh Duong with economic structure is defined as industry and services, but in long-term development strategies, these provinces have always remained essential to agricultural and rural development. These localities always consider agriculture and rural areas an important factor in the province's sustainable development. In the period 2010 - 2019, the agricultural structure of the Southern key economic region has shifted in the direction of reducing the proportion of the crop industry and increasing the proportion of the livestock industry. This is reflected in the number of farms of the crop industry decreasing over the years, from 3,735 farms in 2011 to 2,269 in 2019, while the number of farms in the livestock industry increased from 2,224 farms in 2011 to 5,352 farms in 2019 (an increase of 2.4 times). In the livestock structure, the number of cows, pigs, and poultry tends to increase while the number of buffaloes tends to decrease, which is also consistent with the annual decrease in the area of rice cultivation in the region. Table 4 shows that from 2010 to 2019, although the area under rice cultivation in the region decreased every year, it still accounted for approximately 13% of the country's rice-growing area. In 2019, the whole region had 957.9 thousand hectares of rice cultivation, of which Long An province had the largest rice-growing area, 506.3 thousand hectares, accounting for 52.86% of the rice-growing area of the whole region. Accordingly, the region's rice production in the period 2010 - 2019 has increased, but the growth rate is very low, from 4.95 billion tons of rice in 2010 to 5.31 billion tons of rice in 2019, an average increase of 0.79%/year. Only the summer-autumn and autumn-winter crops increased by an average of 0.42%/year, while the winter-spring and winter-spring crops both decreased.

Table 4: Area and full-year rice production of the Southern key economic region in the period 2010 - 2019

Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Area (Thousand ha)										
Whole country	7489,4	7655,4	7761,2	7902,5	7816,2	7828,0	7737,1	7705,2	7570,9	7470,1
Southern key economic region	1010,2	1019,1	1035,4	1043,6	1023,0	1020,9	1013,3	1009,4	982,8	957,9
<i>In which:</i>										
- Winter-spring rice crop	412,3	412,3	423,3	388,7	386,9	384,5	381,6	383,4	384,2	379,2
- Summer-autumn and autumn-winter rice crops	461,1	474,7	480,9	533,5	517,6	523,1	521,7	518,1	495,1	478,9
- Seasonal rice crop	136,8	132,1	131,2	121,4	118,5	113,3	110,0	107,9	103,5	99,8
Production (thousand tons)										
Whole country	40005,6	42398,5	43737,8	44039,1	44974,6	45091,0	43165,1	42738,9	44046	43448,2
Southern key economic region	4948,1	5244,7	5432,1	5510,9	5580	5639,2	5437,7	5289,2	5476,0	5309,4
<i>In which:</i>										
- Winter-spring rice crop	2372,4	2427,9	2582,9	2434,6	2543,2	2535,1	2332,4	2219,6	2410,6	2415,8
- Summer-autumn and autumn-winter rice crops	2003,2	2259,1	2276,2	2541,1	2495,5	2579,1	2595,1	2556,7	2561,0	2400,6
- Seasonal rice crop	572,5	557,7	573,0	535,2	541,3	525,0	510,2	512,9	504,4	493

Source: Compiled from the General Statistics Office's data

Table 5: Number of farms by field of operation of the Southern key economic region in the period 2011 - 2019

Year	2011	2012	2013	2014	2015	2016	2017	2018	2019
Whole country	20078	22655	23774	27114	29389	33488	34048	31668	32313
Cultivation farm	8635	8861	8745	8935	9178	9216	9099	8499	8420
Livestock farm	6267	8133	9206	12642	15068	20869	21158	19639	20310
Aquaculture farm	4440	4720	4690	4644	4175	2350	2627	2332	2328
Other Farms	736	941	1133	893	969	1053	1164	1198	1255
Southern key economic region	6120	6578	6579	7405	8102	8340	8640	7672	7760
Cultivation farm	3735	3911	3717	3336	3348	2474	2501	2376	2269
Livestock farm	2224	2487	2720	3935	4621	5687	5670	5168	5352
Aquaculture farm	106	126	98	103	59	116	431	106	112
Other Farms	55	54	44	31	74	63	38	22	27

Table 6: Number of livestock at the time of October 1 every year of the southern key economic region in the period 2010 - 2019

Unit: Thousand

Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Buffalo	78,0	75,4	71,0	66,7	62,6	59,9	54,6	50,3	48,2	44,6
Cow	594,4	560,1	532,6	520,8	524,0	533,4	551,4	571,8	586,8	643,5
Pig	3.312,9	3.633,4	3.605,5	3.576,2	3.733,9	3.953,5	4.266,1	4.152,2	4.169,1	3.549,8
Poultry	37.364,0	43.223,0	39.717,0	41.931,0	44.478,0	48.524,0	56.550,0	60.192,0	64.245,0	80.269,0

Source: Compiled from the General Statistics Office's data

The number of livestock farms has increased 2.4 times in the livestock sector, from 2,224 farms in 2011 to 5,352 farms in 2019. Breeding of cattle, poultry, and other livestock is diversified, and improved production efficiency. The livestock scale has been shifted to be more suitable for the market and focus on developing specialty livestock. In the structure of livestock, poultry has the fastest growth rate, increasing 2.15 times, from 37.36 million heads in 2010 to 80.27 million heads in 2019 (an average increase of 8.87%/year), while the number of buffalo tends to decrease from 78,000 heads in 2010 to 44.6 thousand heads in 2019 (Table 6). Most large-scale livestock farms are invested with modern technology, closed cages, forced ventilation, and regularly updated advanced techniques into production. Mechanized production stages such as food mixing, equipment systems for water supply, feed, sanitation, environmental disinfection, and automatic slaughtering systems have brought high economic efficiency.

Forestry sector

Forest area in the southern key economic region in the period 2010 - 2019 tends to increase, from 453.9 thousand ha in 2010 to 506.1 thousand ha in 2019, an average increase of 5,800 ha/year. In which the planted forest area tends to increase more strongly than the natural forest area. The planted forest area in 2010 was 207 thousand ha; by 2019, it had grown to 248.1 thousand ha, an average increase of 4,566.7 ha/year. The natural forest area increased from 246.9 thousand hectares in 2010 to 258,000 hectares in 2019, an average rise of 1,233.3 hectares per year. The forest area in the southern key economic region has increased in recent years, making the region's forest cover also increase, from 12.4% in 2010 to 13.2% in 2019 (Table 7). Along with the increase in forest area, the region's annual timber production in 2010 - 2019 also increased by 1.44 times, from 429,000 m³ in 2010 to 616,300 m³ in 2019, increasing on average 4.1%/year. In 2019, the timber production of the whole region was 616,300 m³, accounting for 3.8% of the country's timber production. Among the four key economic regions of Vietnam, the timber output of the Southern key economic region has consistently ranked second, after the central key economic region (Table 7).

Table 7: Forest area and timber production of the Southern key economic region compared with other key economic regions and the whole country from 2010 - 2019

Year	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019
Forest area (Thousand ha)										
Whole country	13388,1	13515,1	13862	13954,4	13796,5	14061,9	14377,7	14415,4	14491,3	14609,2
Southern key economic region	453,9	462,7	507,0	498,8	505,8	503,3	511,5	512,7	511,8	506,1
- Natural forest	246,9	246,8	246,8	247,7	248,7	247,8	258,6	258,5	258,5	258,0
- Plantation forest	207,0	215,9	260,2	251,1	257,1	255,5	252,9	254,2	253,3	248,1
- Forest coverage (%)	12,4	12,5	13,3	13,2	13,3	13,5	13,4	13,4	13,4	13,2
Production of harvested wood (Thousand m³)										
Whole country	5988,1	4692,0	5251,0	5908,0	7701,4	11304,3	12633,2	14181,8	15248,0	16314,0
Northern key economic region	167,7	253,6	294,1	361,5	480,6	458,9	434,5	443,2	458,8	464,8
Central key economic region	677,2	867,7	1006,3	1196,7	1964,7	3291,43	3604,8	4074,5	4468,8	3835,4
Southern key economic region	429,0	493,5	494,4	456,9	467,7	511,2	544,8	565,4	591,8	616,3
Key economic region of the Mekong Delta region	182,1	220,4	245,5	217,6	257,1	271,6	251,6	297,1	303,2	303,7

Source: Synthesized from the Statistical Yearbook and the National Forest Status Announcement over the years

Aquaculture sector

Table 8 shows that the aquaculture area in the southern key economic region from 2010 - 2019 has decreased from 74,200 ha in 2010 to 52,600 ha in 2019, an average decrease of 2,400 ha/year. In 2019, the region's aquaculture area accounted for only 4.6% of the country's aquaculture area. Although the exploitation and aquaculture area of the southern key economic region tends to decrease in the period 2010 - 2019, with more and more modern farming methods, the production of aquatic products in the region has increased more and more. Fishery production of the region in 2010 was 607 thousand tons; by 2019, it had grown to 859.2 thousand tons, achieving an average annual growth rate of 3.93%/year. In which the production of caught fishery increased by 1.43 times from 370 thousand tons to 531 thousand tons, aquaculture production increased by 1.39 from 236.5 thousand tons to 328.2 thousand tons in this period.

Table 8: Aquaculture area and fishery output of the southern key economic region in the period 2010 - 2019

Year	Area (Thousand ha)		Production (Thousand tons)			
	Whole country	The southern key economic region	Whole country	The southern key economic region	Exploited	Raising
2010	1052,6	74,2	5142,7	607,0	370,6	236,5
2011	1040,5	77,1	5447,4	629,2	375,9	253,3
2012	1038,9	52,4	5820,8	670,0	402,5	267,4
2013	1046,4	51,8	6019,7	661,8	387,8	274,1
2014	1056,3	49,8	6333,2	693,4	406,0	287,4
2015	1057,3	48,2	6582,1	735,6	427,7	307,9
2016	1072,8	50,8	6870,7	775,1	455,8	319,3
2017	1106,8	51,1	7313,4	807,1	472,2	334,9
2018	1126,7	52,6	7769,1	836,2	487,7	348,5
2019	1147,7	52,6	8268,2	859,2	531,0	328,2

Source: Compiled from the General Statistics Office's data

In the region's aquaculture, many aquatic species are concentratedly farmed, such as shrimp, fish, crab, etc, in which fish production accounts for a large proportion of the region's total aquaculture output, concentrated in Long An, Tien Giang. In cultivating fish of high economic value, technological processes transferred from reputable professional units are applied, requiring the implementing units to comply with the selection of varieties, the care, nutritious diet, reproductive regime, etc.

CONCLUSION

The process of restructuring the agricultural sector in the southern key economic region for 2010-2019 has partly met the process of industrialization and modernization of the region. However, in the coming period, it is necessary to develop agriculture in the Southern key economic region comprehensively and sustainably in the direction of large commodity production with modern production organization and techniques. Localities in the region need to develop eco-friendly agriculture and improve product quality. In addition, localities need to accelerate economic restructuring in agriculture and rural areas toward industrialization and modernization, improving economic efficiency per unit area. To achieve high efficiency in the process of economic restructuring is necessary to bring scientific and technical progress and new technology together with appropriate policies and mechanisms to promote production. Localities need to make drastic changes in the internal structure of the agricultural sector towards modernization, raising the value of products and goods, agricultural development associated with new rural construction, improving the quality of material and spiritual life of the rural population. It is necessary to have a plan to build the region into a national seed center with facilities for experimental research, application of advanced technologies and techniques, as a focal point for receiving and transferring technology in the field of agriculture; building brands for many agricultural products with strengths and characteristics of the region.

REFERENCES

General Statistics Office of Vietnam: <https://www.gso.gov.vn/>
 Ministry of Agriculture and Rural Development. (2020). Announcement of national forest status from 2010 to 2020: <https://www.mard.gov.vn/>
 Statistical Office of Ba Ria - Vung Tau province. (2011). Statistical Yearbook 2010. Statistical Publishing House, 2011.
 Statistical Office of Ba Ria - Vung Tau province. (2016). Statistical Yearbook 2015. Statistical Publishing House, 2016.

Statistical Office of Ba Ria - Vung Tau province. (2018). Statistical Yearbook 2017. Statistical Publishing House, 2018.
 Statistical Office of Ba Ria - Vung Tau province. (2020). Statistical Yearbook 2018. Statistical Publishing House, 2019.
 Statistical Office of Ba Ria - Vung Tau province: <http://thongkebariavungtau.gov.vn/>
 Statistical Office of Binh Binh Phuoc province. (2020). Statistical Yearbook 2019. Statistical Publishing House, 2020.
 Statistical Office of Binh Duong province. (2011). Statistical Yearbook 2010. Statistical Publishing House, 2011.
 Statistical Office of Binh Duong province. (2016). Statistical Yearbook 2015. Statistical Publishing House, 2016.
 Statistical Office of Binh Duong province. (2018). Statistical Yearbook 2017. Statistical Publishing House, 2018.
 Statistical Office of Binh Duong province. (2020). Statistical Yearbook 2019. Statistical Publishing House, 2020.
 Statistical Office of Binh Duong province: <https://thongke.binhduong.gov.vn/>
 Statistical Office of Binh Phuoc province. (2011). Statistical Yearbook 2010. Statistical Publishing House, 2011.
 Statistical Office of Binh Phuoc province. (2016). Statistical Yearbook 2015. Statistical Publishing House, 2016.
 Statistical Office of Binh Phuoc province. (2018). Statistical Yearbook 2017. Statistical Publishing House, 2018.
 Statistical Office of Binh Phuoc province: <http://ctk.binhphuoc.gov.vn/>
 Statistical Office of Dong Nai province. (2011). Statistical Yearbook 2010. Statistical Publishing House, 2011.
 Statistical Office of Dong Nai province. (2016). Statistical Yearbook 2015. Statistical Publishing House, 2016.
 Statistical Office of Dong Nai province. (2018). Statistical Yearbook 2017. Statistical Publishing House, 2018.
 Statistical Office of Dong Nai province. (2020). Statistical Yearbook 2019. Statistical Publishing House, 2020.
 Statistical Office of Ho Chi Minh city. (2011). Statistical Yearbook 2010. Statistical Publishing House, 2011.
 Statistical Office of Ho Chi Minh city. (2016). Statistical Yearbook 2015. Statistical Publishing House, 2016.
 Statistical Office of Ho Chi Minh city. (2018). Statistical Yearbook 2017. Statistical Publishing House, 2018.

- Statistical Office of Ho Chi Minh city. (2020). Statistical Yearbook 2019. Statistical Publishing House, 2020.
- Statistical Office of Ho Chi Minh city. (2021). Report on socio-economic situation in 2020.
- Statistical Office of <http://thongketiengiang.gov.vn/>
- Statistical Office of Long An province. (2011). Statistical Yearbook 2010. Statistical Publishing House, 2011.
- Statistical Office of Long An province. (2016). Statistical Yearbook 2015. Statistical Publishing House, 2016.
- Statistical Office of Long An province. (2018). Statistical Yearbook 2017. Statistical Publishing House, 2018.
- Statistical Office of Long An province. (2020). Statistical Yearbook 2019. Statistical Publishing House, 2020.
- Statistical Office of Tay Ninh province. (2011). Statistical Yearbook 2010. Statistical Publishing House, 2011.
- Statistical Office of Tay Ninh province. (2016). Statistical Yearbook 2015. Statistical Publishing House, 2016.
- Statistical Office of Tay Ninh province. (2018). Statistical Yearbook 2017. Statistical Publishing House, 2018.
- Statistical Office of Tay Ninh province. (2020). Statistical Yearbook 2019. Statistical Publishing House, 2020.
- Statistical Office of Tay Ninh: <https://cucthongke.tayninh.gov.vn/Lists/ThongTinCanBiet/TongQuat.aspx?PageIndex=2>
- Statistical Office of Tien Giang province. (2011). Statistical Yearbook 2010. Statistical Publishing House, 2011.
- Statistical Office of Tien Giang province. (2016). Statistical Yearbook 2015. Statistical Publishing House, 2016.
- Statistical Office of Tien Giang province. (2018). Statistical Yearbook 2017. Statistical Publishing House, 2018.
- Statistical Office of Tien Giang province. (2020). Statistical Yearbook 2019. Statistical Publishing House, 2020.
